

CLAIMS:

1. An audio pacing device, comprising:
a sensing unit to obtain a parameter of a user in physical exercise; a memory to store a plurality of audio signals having predetermined tempo values; and
a processing unit configured to (1) determine whether intensity of the parameter of the user should be increased, decreased or maintained by using the parameter of the user from the sensing unit and a predetermined reference value, and (2) select an audio signal having a tempo that enables the user to increase, decrease or maintain the intensity.
2. The audio pacing device as claimed in claim 1, wherein the parameter is a pulse rate.
3. The audio pacing device as claimed in claim 1, wherein the parameter is a step-speed rate.
4. The audio pacing device as claimed in claim 1, wherein the tempo is a beat per minute value.
5. The audio pacing device as claimed in claim 2, wherein the sensing unit is a heart rate monitor.
6. The audio pacing device as claimed in claim 3, wherein the sensing unit is a step-speed measurement unit.
7. The audio pacing device as claimed in claim 1, wherein the sensing unit and the processing unit are connected in a wired or wireless way.
8. The audio pacing device as claimed in claim 1, wherein the processing unit is further configured to adjust the tempo of a selected audio signal by a predetermined amount.

9. The audio pacing device as claimed in claim 1, wherein the predetermined reference value includes reference values selected by a user or a programmed exercise routine.

10. The audio pacing device as claimed in claim 1, wherein the audio signals are categorized based on their tempo value.

11. The audio pacing device as claimed in claim 1, wherein the predetermined tempo values of the plurality of audio signals are determined either by the audio pacing device, or by an external device and transferred to the audio rate pacing device.

12. The audio pacing device as claimed in claim 1, wherein the audio signals are encoded in an MP3, WAV, MPEG-4, WMA, or AAC format.

13. The audio pacing device as claimed in claim 1, further including a switch to enable use of the audio pacing device in a first mode having a first sensing unit and a first parameter and a second mode having second sensing unit and a second parameter.

14. An audio pacing method, comprising the steps of:
receiving a parameter of a user in physical exercise from a sensing unit;
determining whether intensity of the parameter of the user should be increased, decreased or maintained by using the parameter of the user from the sensing unit and a predetermined reference value;
selecting an audio signal having a tempo that enables the user to increase, decrease or maintain the intensity.

15. The audio pacing method as claimed in claim 14, further comprising the step of adjusting the tempo of a selected audio signal

16. The audio pacing method as claimed in claim 14, further comprising the step of a user selecting the said predetermined reference value from a group of reference values or a programmed exercise routine.

17. The heart rate audio pacing method as claimed in claim 14, wherein the audio signals are encoded in an MP3, WAV, MPEG-4 , WMA , or AAC format.

18. The audio pacing method as claimed in claim 14, wherein the parameter is a pulse rate or a step speed rate.

19. The audio pacing device as claimed in claim 14, wherein the sensing unit is a heart rate monitor or a step-speed measurement unit.

20. An audio pacing device, comprising:

a sensing unit to obtain a parameter that is representative of a status of a user in motion;
a memory to store a plurality of audio signals having predetermined tempo values; and

a processing unit configured to (1) determine whether the parameter should be increased, decreased or maintained by using the parameter from the sensing unit and a predetermined reference value, and (2) select an audio signal having a tempo that enables the user to increase, decrease or maintain the parameter.